

and 73-75 have been canceled without prejudice. New claims 80-85 have been presented for consideration. The outstanding issues in the present Office Action are:

- Claims 1, 9, 10, 13, 18, 27, 28, 55 and 62 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kim, U.S. Patent No. 5,546,465 (hereinafter *Kim*).
- Claims 5-8, 11, 12, 14, 16, 17, 23-25, 29, 34, 76-79 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Kim*.
- Claims 2-4, 19-21, 30, 32-33, 35-43, 56-61 and 63-68 stand objected to as being dependent upon a rejected base claim, but have been indicated as allowable if rewritten in independent form.
- Claims 69-72 are allowable over prior art of record.

I. In General

Applicants thank the Examiner for indicating that claims 2-4, 19-21, 30, 32-33, 35-43, 56-61 and 63-68 would be allowable if rewritten in independent form. With regard to claims 1, 8 and 18, Applicants note that the underlining of the word "x" and/or the word "n" in these claims is intended to be part of the claim.

Accordingly, Applicants have amended independent claim 1 to incorporate a limitation substantially as previously recited in allowable claim 2. Claim 2 has been canceled. Claim 3 has been amended to depend from claim 1.

Applicants have amended independent claim 18 to incorporate a limitation substantially as previously recited in allowable claim 19. Claim 19 has been canceled. Claim 20 has been amended to depend from claim 18.

Applicants have amended independent claim 29 to incorporate a limitation substantially as previously recited in allowable claim 32. Claim 32 has been canceled.

Applicants have amended independent claim 34 to incorporate a limitation substantially as previously recited in allowable claim 36. Claim 36 has been canceled. Claim



37 has been amended to depend from claim 35 and to correct a typographical error. Claim 43 has been amended to correct a typographical error.

Applicants have amended independent claim 55 to incorporate a limitation substantially as previously recited in allowable claim 60. Claim 60 has been canceled. The “means for creating” of claim 56 has been amended to recite “the attenuated second input signal” instead of “the attenuated second input”. Claim 57 has been amended to clarify the “means for accepting” of claim 57. Claim 61 has been amended to depend from claim 55.

Applicants have amended independent claim 62 to incorporate a limitation substantially as previously recited in allowable claim 67. Claim 67 has been canceled. Claim 63 has been amended to correct a typographical error. The step of “creating” of claim 63 has been amended to recite “the attenuated second input signal” instead of “the attenuated second input”. Claim 65 has been amended to correct a typographical error. Claim 68 has been amended to depend from claim 62.

Claims 15, 22, 26, 31, 44-54, and 73-75 have been withdrawn without prejudice.

II. New Claims 80-85

New claims 80-85 have been added. Applicant submit that there is adequate support for the new claims in the specification and drawings as originally filed.

Independent claim 80 recites

means for creating virtual sound images by expanding in pairs certain of the input signals for presentation to the plurality of speakers

Thus, as discussed for example on page 4, lines 16-20 of the specification of the present application and as shown for example, in FIGURE 1C, in the present invention of claim 80, input signals are expanded so that the sound appears to a listener to be coming from locations beyond the physical boundaries of the speakers thereby creating virtual sound images. This is not taught or suggested by *Kim*. There is no indication in *Kim* that the disclosure of *Kim* could be used for creating virtual sound images as recited in independent claim 80.

Claim 81 recites

wherein at least one of said means for creating virtual sound images includes a QX filter

This is not taught or suggested by *Kim*. As shown in FIGURE 4 of *Kim*, *Kim* uses filters 45, 46, 47, and 48 for modifying signals FL, FR, RL and RR. The Office Action admits that none of the filters 45, 46, 47 or 48 is a QX filter. Thus, claim 81 is not anticipated by *Kim*. Furthermore, claim 81 is not obvious under 35 U.S.C. §103 in view of *Kim*. It is well settled that the fact that references can be combined or modified is not sufficient to establish a prima facie case of obviousness, M.P.E.P. § 2143.01. *Kim* does not suggest that a QX filter could be used for filters 45, 46, 47 or 48 as recited in claim 81. In fact, there is no suggestion in *Kim* for modifying the filters of *Kim* to be any filter other than those shown or described in the disclosure of *Kim*.

Moreover, Applicants further submit that even if the disclosure of *Kim* is modified such that one of the filters 45, 46, 47, or 48 is a QX filter, the present invention of claim 81 would not result. In the present invention a QX filter is used to provide virtual sound images. Simply replacing one of the filters in *Kim* with the QX filter of the present invention would not provide "means for creating virtual sound images" in *Kim*. In order to provide the desired virtual sound images the principle of operation of *Kim* would have to be changed, i.e. each filter would have to be provided with a different set of input signals than those currently provided. Thus, the modification of *Kim* to provide virtual sound images wherein at least one of the means for creating virtual sound images includes a QX filter would not be obvious as it would change the principle of operation of *Kim*. Accordingly, *Kim* neither teaches nor suggests this element of claim 81.

Independent claim 82 recites a limitation substantially as previously recited in claim 56. As the Office Action indicates that claim 56 would be allowable if written in independent form, therefore claim 82 should be allowable.

Independent claim 83 recites a limitation substantially as previously recited in claim 60 except that it includes the limitation that "said center speaker is a virtual speaker". As the Office Action indicates that claim 60 would be allowable if written in independent form and



as *Kim* does not teach that a center speaker is a virtual speaker, therefore claim 83 should be allowable.

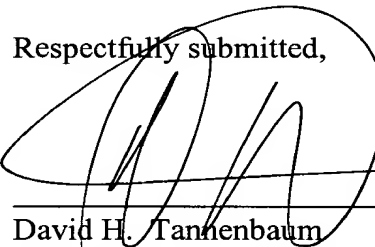
Independent claim 84 recites a limitation substantially as previously recited in claim 63. As the Office Action indicates that claim 63 would be allowable if written in independent form, therefore claim 84 should be allowable.

Independent claim 85 recites a limitation substantially as previously recited in claim 60 except that it includes the limitation that "said center speaker is a virtual speaker". As the Office Action indicates that claim 60 would be allowable if written in independent form and as *Kim* does not teach that a center speaker is a virtual speaker, therefore claim 85 should be allowable.

III. Summary

Applicants request that the Examiner call the below listed attorney if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.

Respectfully submitted,



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